



# What is the Plan for Bringing Electricity to our Homes and Businesses?

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# Renewable Energy Industries Association-NM

- New Mexico based trade organization representing 60+ diverse companies engaged in the renewable energy business with a focus on Distributed Energy Resources (DER). Founded in 2004.
- Mission is to support, promote and advance the transition to renewable energy in New Mexico helping to create more jobs, and a strong, healthy economic future for our state.
- Members and customers located throughout urban and rural New Mexico.
- Active in New Mexico regulatory and legislative environments.
- REIA-NM is an affiliate of the Solar Energy Industries Association (SEIA).

# The State of Solar in New Mexico

- 2,013 people are employed by New Mexico's solar industry.
- More than 1,777 megawatts of solar has been installed in New Mexico, enough to power 419,068 homes.
- An additional 4,011 megawatts is expected to be installed in the next five years.
- 84 solar companies are operating in New Mexico.
- The value of the New Mexico solar market is estimated at \$3.2 billion; \$433 million invested in 2022.

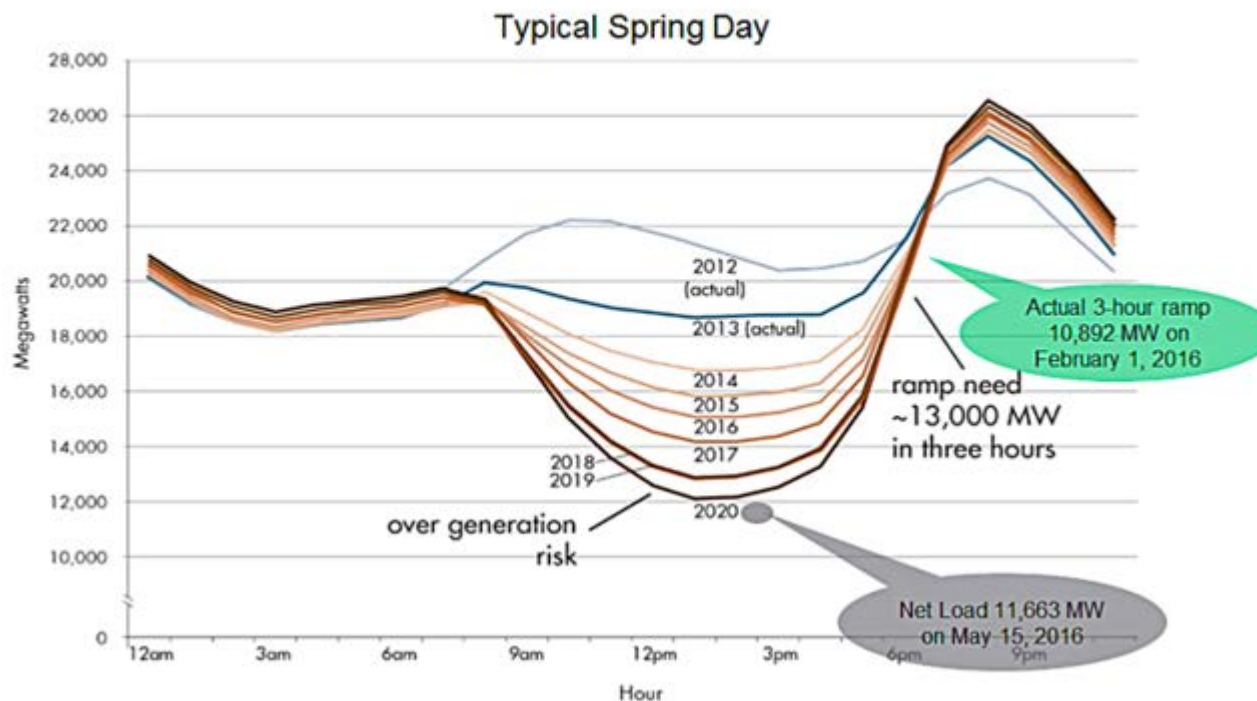


# What is the Current Situation?

- The U.S. Electrical Grid is the largest and most complex machine ever built.
- For the first time in decades, load (electrical usage) is expected to increase dramatically due to EV adoption, building electrification.
- The Energy Transition Act of NM requires replacing fossil fuel electrical generation with renewables that have variable generation, creating a need for significant amounts of energy storage.
- Homes and businesses are now able to generate their own energy with solar.
- Distribution planning reporting by utilities to PRC is not currently required.
- The largest and most complex machine needs to be upgraded. This includes how we deliver electricity to our homes and businesses.
- Inflation Reduction Act will pump \$369 Billion into economy. Unprecedented opportunity for state to take advantage of federal funds to invest in NM.

# California Duck Curve

Figure 2: The duck curve shows steep ramping needs and overgeneration risk



- As the amount of electricity generated from solar increases, the disparity from when electricity is generated and when it is needed increases. Over supply around noon time and under supply in early evening. Supply does not sync up with demand. The storage of energy is needed to address this issue.



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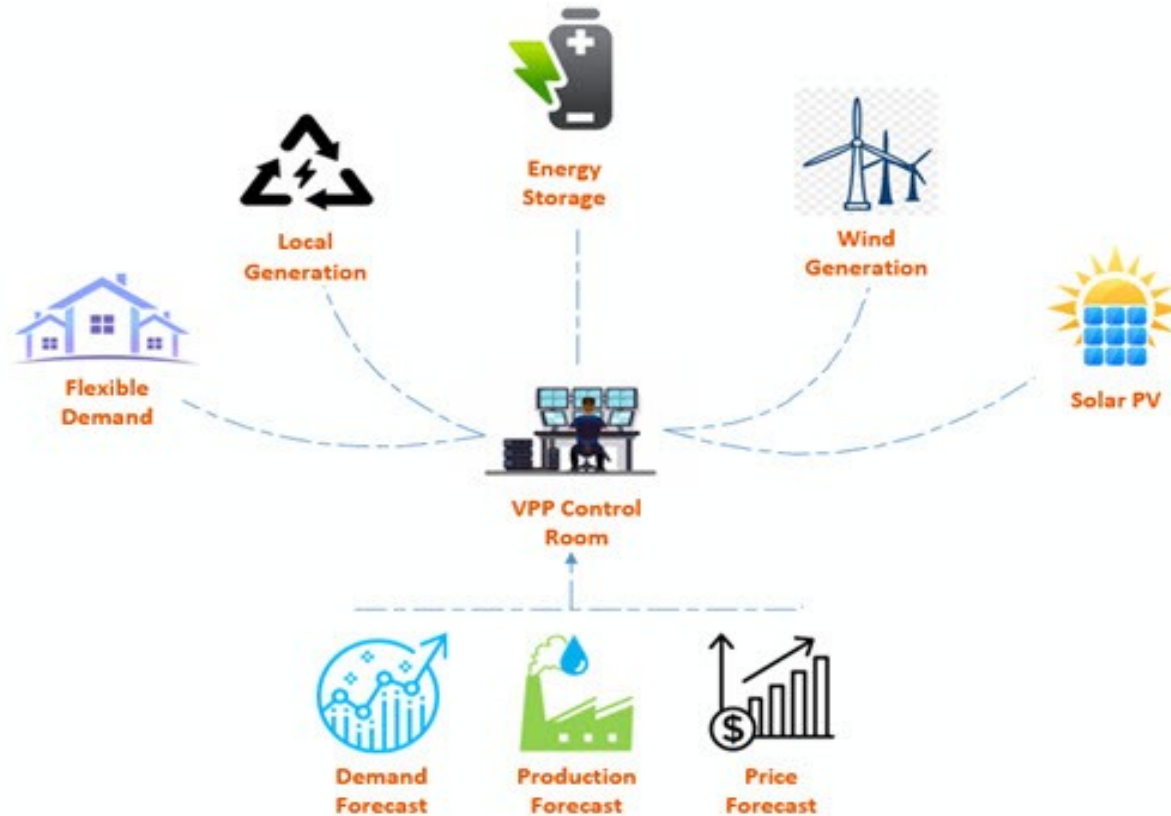
## The Important Role of Small Distributed Energy Resources

- Distributed Energy Resources – Small scale energy resources, such as rooftop solar, Community Solar and battery storage, usually situated near sites of electricity use.
- More than 50,000 solar systems installed at homes and businesses in New Mexico. Less than 1 % are paired with energy storage.
- Solar sales expected to triple in the U.S by 2030.
- Presently 2 GW of Behind the Meter (BTM) energy storage installed in the U.S. This is expected to increase to 27 GW by 2030.
- Electric Vehicles expected to increase in the U.S. from 3 million now to 26 million by 2030.
- Need to be open to new solutions: storage on the distribution system, microgrids, Virtual Power plants (VPP) & Vehicle to Grid (V2G) charging

# IDEAS to Improve the Delivery of Electricity

- Distribution System Planning: allows us to be reactive instead of proactive when addressing capacity issues on the system. Better outcomes.
- Hosting Capacity Analysis (HCA): can't fix what you can't see or measure. Need to know the capacity of distribution lines to be able to best utilize them and identify areas that need to be improved. Considered best practice.
- Reform/eliminate current cost causation model so that investments in the grid are not dis-incentivized by having entity tripping the need for upgrade to bear all of the cost.
- Non Wires Alternatives to address distribution line capacity issues include DER, energy storage, microgrids and other approaches that reduce or shift load.
- Flexible interconnection: enables the interconnection of more DERs by agreeing to curtail generation at certain times or under certain conditions.
- Distributed Power Plant (DPP)/Virtual Power Plant (VPP): enables networking of customer sited solar system with storage to dispatch energy on demand.

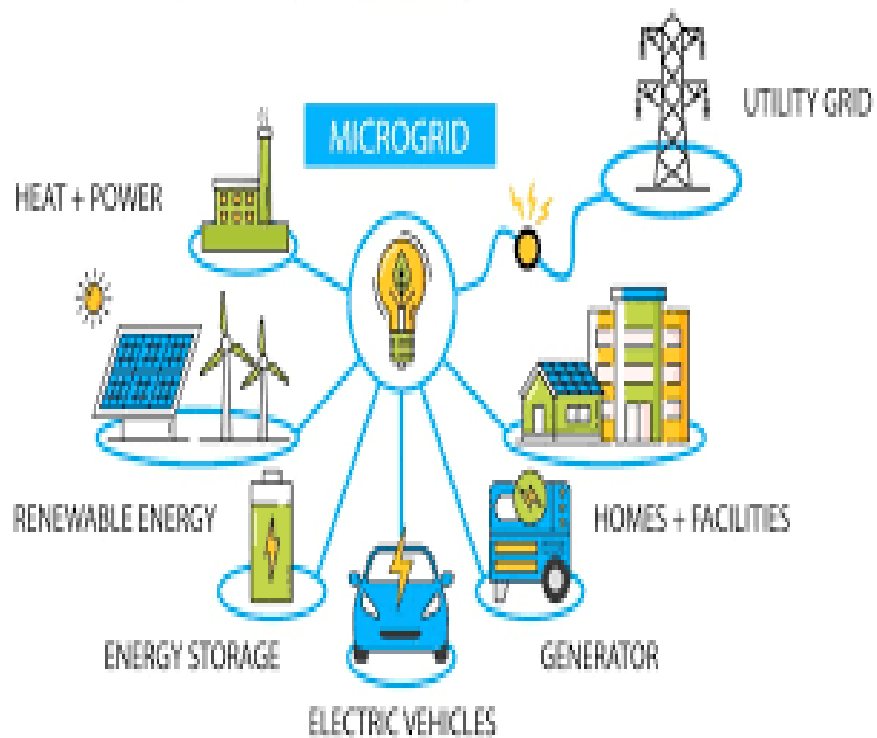
# Distributed Power Plant (DP)/Virtual Power Plant (VPP)



- DERs, including BTM solar systems and EVs, can be grouped and controlled by a utility to support the power system.
- Drivers include declining costs, technological advances, Inflation Reduction Act (IRA) and FERC Order 2222.
- Nationally, by 2030 BTM solar expected to grow from 27 GW to 83 GW. BTM storage from 2 GW to 27 GW and EVs from 3 million to 26 million by 2030.
- This model is considered a Lower Cost Resource Adequacy.
- Pilot Projects by PG&E/Sunrun and others.



# Micro Grids



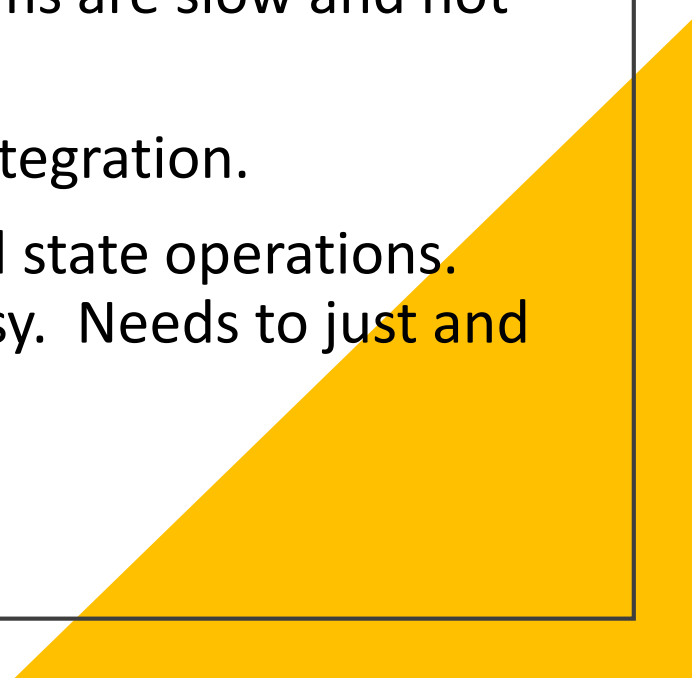
- a small network of electricity users with a local source of supply that is usually attached to a centralized grid, but is able to function independently.

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# Inflation Reduction Act (IRA)

- Will invest \$369 Billion in renewal energy and climate change initiatives over the next 10 years.
- 30% tax credit for wind and solar systems. Government bodies, native American governments and non-profits are eligible for direct pay.
- 10% additional tax credit for systems in “Energy Communities.”
- Up to 20% additional tax credits for systems that are in low-income communities.
- Additional tax incentives for domestically produced solar components. Maxeon Solar and Ebon Solar plants in NM to employ 2,700 people.
- Other incentives for build out EV networks, upgrades to home electrical systems and building electrification.

# Challenges Moving Forward

- Energy Storage attachment rate with solar systems in NM is very low. Need incentives so that these systems can provide resiliency and grid support.
  - Current processes to upgrade electrical distribution systems are slow and not cost effective.
  - Current cost causation model strongly discourages DER integration.
  - The state is currently reliant on oil & gas revenues to fund state operations. The transition to a fossil fuel free economy will not be easy. Needs to just and orderly.
  - Need to move faster.
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# NM Legislation on Small Scale Energy Storage

- HB32/HB547-Energy Storage System Income Tax Credit in 2023 legislative session was passed, but not chaptered. Similar bill in 2024 died in committee.
- 40% tax credit for energy storage systems with limit of \$5,000 on residential and \$150,000 on commercial properties, \$6 million annual cap, 5-year sunset.
- New Mexico is behind most states in the attachment rate of solar with storage. This type of legislation would help to jumpstart this market and help enable a DPP/VPP program.
- Many benefits include helping New Mexico become a leader in this fast growing industry, addresses resiliency concerns, economic growth, job creation.



- Legislation for an Energy Storage System Income Tax Credit.
- Implement programs at the three Investor-Owned Utilities to create DPP/VPP programs.
- Pass legislation that addresses lack of Distribution Planning in NM that incorporates Hosting Capacity Analysis, addresses cost causation model disincentives, non-wire alternatives, flexible interconnection and DPP/VPP.

# Questions?

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